

## ABSTRACT

A PIN detector device (190) is fabricated on a substrate (10). The substrate (10) includes a handle wafer portion (208), an implanted oxide layer (206), a backside contact layer (204) and an active wafer portion (202). The substrate (10) serves as a foundation to increase stability and facilitate handling during fabrication of electrical circuitry (248) on a surface of the active wafer portion (202). After the electrical circuitry fabrication processing is substantially complete, the handle wafer portion (208) and implanted oxide layer (206) are removed to expose the implanted backside contact layer (204).